

Appendix A



Rapid review of the literature

SARS-CoV-2 variant VUI-202012/01 – implications for infection control within health and care settings

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Aim

Concerns have been raised regarding the transmissibility of a newly identified COVID-19 variant strain which appears to be predominantly circulating in the South East of England and is defined by multiple spike protein mutations.¹ It is referred to as SARS-CoV-2 VUI 202012/01 in the UK.¹

According to a British Medical Journal news article, “as of 13 December, 1108 cases with this variant had been identified in the UK. [...] These cases were predominantly in the south east of England, but there have been recent reports from further afield, including Wales and Scotland”.²

This rapid review was conducted to assess the current evidence base regarding the impact that this new strain may have on current COVID-19 infection prevention and control recommendations.

Objectives

The following research question was assessed:

What is the current evidence base regarding the infection control implications of spread of a new variant of SARS-CoV-2 (VUI-202012/01) within the UK?

Methodology

For details of the search strategy see Appendix 1.

As this was a rapid review, evidence was critiqued by a single reviewer but not formally graded with the use of an appraisal tool.

Results

The literature search conducted for this rapid review yielded 56 results, none of which were relevant to the research question. A grey literature search resulted in assessment of 2 documents.

The ECDC published a threat assessment brief on the 20th of December 2020 which outlined that preliminary UK analysis had revealed that the new strain of COVID-19, VUI 202012/01, has an estimated increased transmissibility of up to 70% with the potential to increase the R number by 0.4, for which they reference a UK ministerial statement.¹ Multiple figures are presented, one of which shows an increase in the proportion of UK COVID-19 isolates which are VUI 202012/01 from 0 to 11% as of the 20th of December 2020.¹ The ECDC comment that the increased proportion of

VUI 202012/01 infections appears to correlate with an increase in case numbers, however, this increase could be attributable, at least in part, to a seasonal related increase in social mixing.¹ The ECDC also highlight that in the UK, around 5 to 10% of all COVID-19 cases are regularly sequenced.¹ They expand on this point by stating that in most EU countries much smaller proportions of virus isolates are sequenced, and therefore, more widespread circulation of this variant outside of the UK cannot be excluded.¹ The ECDC conclude that there is no indication at this point of increased infection severity associated with the new variant but that currently, the majority of cases have been reported in people under 60 years old, who are less likely to develop severe symptoms.¹ In regards to infection prevention and control, the ECDC's recommendations reflect those of current guidance by reinforcing the importance of strict adherence to non-pharmaceutical interventions by the public as well as the avoidance of non-essential travel and social activities.¹

Minutes from a recent NERVTAG meeting reveal that, based on primary evidence, the committee had *"moderate confidence that VUI-202012/01 demonstrates a substantial increase in transmissibility compared to other variants"*.³ This conclusion was based on data which suggests a growth rate 71% (95%CI: 67%-75%) higher than other variants, studies which suggest an absolute increase in the R-value of between 0.39 to 0.93 and the fact that the strain *"demonstrated exponential growth during a period when national lockdown measures were in place"*.³

Conclusion

There is currently insufficient evidence to ascertain if infection control precautions need to be altered in response to the emergence of the new COVID-19 strain VUI 202012/01.

Appendix 1

Search

The following search strategy was processed in Medline and Embase on 21st December 2020; papers published prior to 2000 were excluded. A total of 56 papers were screened. Additional grey literature searches of online resources was also carried out.

1. coronavirus or corona virus or ncov* or covid* or 2019-ncov or ncov19 or ncov-19 or 2019-novel CoV or sars-cov2 or sars-cov-2 or sarscov2 or sarscov-2 or Sars-coronavirus2 or Sars-coronavirus-2 or SARS-like coronavirus* or coronavirus-19 or covid19 or covid-19
2. variant or mutation or mutated or VUI-202012/01
3. 1 and 2
4. infection control OR disinfection OR decontamination OR personal protective equipment OR ppe OR surgical mask* OR respiratory protective device* OR respirator OR FFP3 OR eye protective device* OR goggles OR face shield* OR visor* OR safety glasses OR hand hygiene OR clean* OR transmission
5. 3 and 4
6. Limit to English language
7. Limit to Human studies
8. Limit from 01/08/2020-21/12/2020

References

1. ECDC. December 2020. Threat Assessment Brief. Rapid increase of a SARS-CoV-2 variant with multiple spike protein mutations observed in the United Kingdom. Available online at <https://www.ecdc.europa.eu/en/publications-data/threat-assessment-brief-rapid-increase-sars-cov-2-variant-united-kingdom>
2. Wise J. 2020. NEWS BRIEFING. Covid-19: New coronavirus variant is identified in UK. British Medical Journal. 371:m4857 Available online at <http://dx.doi.org/10.1136/bmj.m4857>
3. NERVTAG meeting on SARS-CoV-2 variant under investigation VUI-202012/01. 18th December 2020. Available online at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/939173/S0867_EMG_Potential_application_of_air_cleaning_devices_and_personal_decontamination_to_manage_transmission_of_COVID-19.pdf